Serial No.: 10/066,124 Attorney Docket No.: 01-40 US

IN THE CLAIMS:

Please amend the claims as follows:

1. (Currently amended) An integrated ion focusing and gating lens for use in a mass spectrometer comprising: first and second members forming a generally cylindrical configuration about an axis for focusing ion flow along said axis when each said member is biased with the same voltage and for deflecting an ion flow when ~~each~~ said members are ~~is~~ biased with ~~a different~~ respective voltages of opposite polarities.

2. (Original) The integrated ion focusing and gating lens as defined by claim 1, wherein the mass spectrometer includes an ion trap having an end cap lens with an aperture therein, the axis of the ion focusing and gating lens being aligned with an axis of the end cap lens for directing the ion flow through the aperture.

3. (Original) The integrated ion focusing and gating lens as defined by claim 2, wherein the mass spectrometer further includes multipole rods functioning as an ion guide for directing ions through an ion focus lens to the ion focusing and gating lens.

4. (Original) The integrated ion focusing and gating lens as defined by claim 1, wherein the first and second members are identical in configuration.

5. (Currently amended) In an ion trap mass spectrometer, apparatus for directing ions from a source to the ion trap comprising:

a) an ion guide including multipole rods and an ion guide exit for receiving an ion beam from the source and directing the ion beam through the ion guide exit;[[,]]

b) an ion guide focus lens having an aperture for receiving the ion beam when voltage biased;[[,]]

c) a deflector lens including first and second members forming a generally cylindrical configuration, said members focusing ion flow along an axis of the generally cylindrical configuration when biased with the same voltage on each member, and said members deflecting an ion flow when biased with ~~different~~ respective voltages of opposite polarities;[[,]] and

d) an ion trap end cap lens having an aperture for receiving an ion beam from the deflector lens for the ion trap.

6. (Original) Apparatus as defined by claim 5, wherein the first and second members are identical in configuration.

7. (Original) Apparatus as defined by claim 6, further comprising a vacuum pump for maintaining evacuated atmospheres in the ion guide and in the deflector lens.

8. (Currently amended) An ion trap mass spectrometer comprising:

a) an atmospheric pressure ion source;[[,]]

b) an ion guide for receiving an ion beam from the ion source;[[,]]

c) a deflector lens having first and second members of generally cylindrical configuration, said members focusing ion flow along an axis of the generally cylindrical configuration when biased with the same voltage on each member, and said members deflecting an ion flow when said members are biased with ~~different~~ respective voltages of opposite polarities;[[,]] and

d) an ion trap including an end cap having an aperture for receiving the ion beam from the deflector lens.

9. (Original) The ion trap mass spectrometer as defined by claim 8, further comprising a vacuum pump for maintaining evacuated atmospheres in the ion guide and in the deflector lens.

10. (Original) The ion trap mass spectrometer as defined by claim 9, wherein the first and second members of the deflector lens are identical in configuration.

11. (Original) The ion trap mass spectrometer as defined by claim 10, wherein the ion guide includes multipole rods and an ion exit guide.

12. (Original) The ion trap mass spectrometer as defined by claim 11, further comprising an ion guide focus lens having an aperture for receiving an ion beam from the ion guide exit.

13. (Original) The ion trap mass spectrometer as defined by claim 12, further comprising an ion detector for receiving and detecting the mass of ions from the ion trap.

14. (Original) The ion trap mass spectrometer as defined by claim 8, further comprising an ion detector for receiving and detecting the mass of ions from the ion trap.